REMARKS

1. Interview Summary

An interview was conduct between the Examiner and Timothy Le Duc on February 21, 2006. A proposed amendment to the claims and the previous Office Action was discussed. However, no agreement was reached at that time with respect to the proposed amendment.

2. Claim Rejections – 35 U.S.C. § 112 ¶ 1

In the Office Action mailed December 6, 2005, claims 1 and 14 were rejected under 35 U.S.C. § 112, first paragraph. Claims 1 and 14 have been cancelled. Hence, Applicants respectfully submit that this rejection has been rendered moot.

3. Claim Rejections – 35 U.S.C. § 112 ¶ 2

In the Office Action, claims 1-27 and 29-31 were rejected under 35 U.S.C. § 112, second paragraph. Claims 1 and 14 have been cancelled. Hence, Applicants respectfully submit that this rejection has been rendered moot.

4. Claim Rejections – 35 U.S.C. § 103

A. Negri et al. and Pausch

In the Office Action, claims 1, 5, 14-15, 19, 25-32 and 34-36 were rejected as being unpatentable over Negri et al. in view of Pausch (U.S. Patent No. 4,995,645). Claims 6-7 and 20-21 were also rejected as being unpatentable over Negri et al., in view of Pausch, and in further view of design choice. Applicants respectfully traverse these rejections.

i. Claim 32

Independent claim 32 as amended recites a "bell-mouth transition positioned between an expansion chamber outlet and said inlet of the turbocharger." Neither Negri et al. nor Pausch discloses this limitation.

Claim 32 as amended also recites (1) an air filter operable to clean air drawn from an air intake and (2) a clean air channel located downstream of the air filter having a structure that restores pressure head and subsequently increases the velocity of said airflow. On page 6, the Office Action stated that the "air cleaner snorkel 13" of Negri et al. constitutes an air filter. The snorkel 13 of Negri et al. has a "cool air inlet 24 for receiving air at the ambient atmospheric

temperature and a warm air inlet 26 for receiving air heated." Col. 1, ll. 65-67. Hence, the snorkel of Negri et al. is not an air filter operable to clean air drawn from an air intake.

Negri et al. also does not have a clean air channel located downstream of an air filter having a structure that restores pressure head and subsequently increases the velocity of the airflow. The Office Action attempts to overcome the deficiencies of Negri et al. by relying upon Pausch. However, Pausch does not cure these deficiencies. For instance, Pausch does not disclose an air filter, a clean air channel, nor a clean air channel located downstream of an air filter having a structure that restores pressure head prior to a turbocharger inlet. Therefore, Applicants respectfully submit, that even if one were to combine Negri et al. with Pausch, a number of claim 32 limitations would remain absent.

Moreover, the Office Action did not provided any motivation or suggestion to combine Negri et al. with Pausch. The invention of Negri et al. "provides a bleed valve which responds to the high compressor discharge pressure generated during maximum engine power demand," the bleed valve being operable to alter pressure within an induction passage. Col. 5, ll. 1-8. Hence, Negri et al. does not disclose any concern about system losses and restoring pressure via a structure of the air induction system. Therefore, Negri et al. teaches away from the invention of the present application.

Furthermore, Pausch discloses a system for conveying fungible materials, such as grain, pellets, or powder. *See* Col. 1, ll. 10-14; ll. 59-60. One of the goals of Pausch is to not plug the pipe. *See* Col. 1, ll. 56-60. "An important advantage of the elbow of [Pausch] is improved efficiency and cost effectiveness. The elbow causes less conveyed material degradation and reduces the wear on the elbow walls thereby reducing the frequency of replacement. Additionally, the elbow of the present invention does not require expensive multiple layer or wear resistant layer wall construction." Col. 2, ll. 39-46. In other words, Pausch is directed toward reducing the wear and tear caused by transporting fungible materials and not related to air induction systems. Therefore, one skilled in the art would not have looked to combine Negri et al. with Pausch, and the Office Action did not provide any support for such a position.

Accordingly, Applicants respectfully submit that the rejection of independent claim 32 has been overcome. Claims 3-7, 9-13, and 26-28 depend upon claim 32 and should be allowable for similar reasons.

Additionally, claims 6 and 7 were rejected as being unpatentable over Negri et al., in view of Pausch, and in further view of design choice. Claims 6 and 7 as amended depend upon independent claim 32. As noted above, even if one were to combine Negri et al. with Pausch, a number of claim 32 limitations would remain absent. Applicants respectfully submit that design choice would not cure these deficiencies.

Claim 26 as amended recites a clean air channel downstream of the air filter redirecting the airflow at least approximately 180 degrees from the outlet of the air filter to the inlet of the turbocharger. Neither Negri et al. nor Pausch discloses an air channel that redirects the airflow in a direction at least approximately 180 degrees from the outlet of the air filter to the turbocharger inlet.

Claim 27 as amended recites an angular diffuser that redirects the clean induction airflow at least approximately 90 degrees. On page 4, the Office Action stated that a portion of 18 connecting to the air cleaner 14 of Negri et al. discloses an angular diffuser. To the contrary, the portion 18 connected to the air cleaner is a conduit of constant cross-sectional area, which cannot be construed as an angular diffuser of the present application as shown, for example, in Figure 5 and discussed in paragraph 0036. Hence, neither Negri et al. nor Pausch discloses an angular diffuser that redirects the clean induction airflow at least approximately 90 degrees.

Claim 28 as amended recites a diffuser and an expansion chamber that both redirect the direction of the clean induction airflow within the clean air channel at least approximately 90 degrees. Neither Negri et al. nor Pausch discloses a clean air channel having a diffuser and an expansion chamber that are both capable of redirecting airflow within the clean air channel.

ii. Claim 34

Independent claim 34 as amended recites an air filter operable to clean air drawn from an air intake and a clean air channel located downstream from the air filter having a structure located in front of an inlet of the turbocharger that restores pressure head and subsequently

increases the velocity of the airflow. As noted above, neither Negri et al. nor Pausch discloses a clean air channel downstream from an air filter having a structure that restores pressure head and subsequently increases the velocity of the airflow in the clean air channel before delivery to the inlet of a turbocharger.

Additionally, independent claim 34 is a means-plus-function element and should be interpreted in accordance with 35 U.S.C. § 112, ¶ 6. Accordingly, the claims must be interpreted to cover the recited function. *See* MPEP § 2181.

Claim 34 recites means for both (1) restoring pressure head after the airflow has traveled at least a portion of the clean air channel and (2) redirecting the airflow at least approximately 90 degrees from a direction of the airflow exiting the outlet of the air filter to a direction of the airflow entering an inlet of the turbocharger.

Neither Negri et al. nor Pausch discloses both of these recited functions. Negri et al. discloses an elbow in the induction passage. However, an elbow would typically create additional system losses and not restore pressure head. Additionally, Pausch is not directed toward air induction systems but rather fungible material conveying systems. Therefore, even if one were to combine Negri et al. with Pausch, Applicants respectfully submit that a number of claim 34 limitations would remain absent.

Claim 34 as amended also recites a bell-mouth transmission positioned between the structure and the inlet of the turbocharger. Neither Negri et al. nor Pausch disclose this limitation.

Dependent claims 17-18, 20-21, 23-24, 30-31, and 35-36 depend upon claim 34 and should be allowable for similar reasons. Additionally, claims 20 and 21 were rejected as being unpatentable over Negri et al., in view of Pausch, and in further view of design choice. Claims 20 and 21 as amended depend upon independent claim 34. As noted above, even if one were to combine Negri et al. with Pausch, a number of claim 34 limitations would remain absent. Applicants respectfully submit that design choice would not cure these deficiencies.

Claim 30 as amended recites that the airflow is redirected at least approximately 180 degrees from the outlet of the air filter to the inlet of the turbocharger. Neither Negri et al.

nor Pausch discloses redirecting the airflow within a clean air channel 180 degrees from the outlet of an air filter to the inlet of a turbocharger.

Claim 31 as amended recites an angular diffuser, such as shown, for example, in Figure 5 of the present application. Neither Negri et al. nor Pausch discloses an angular diffuser.

Claim 36 as amended recites a clean air channel redirecting the airflow at least approximately 180 degrees from the outlet of the air filter to the inlet of a turbocharger. Neither Negri et al. nor Pausch discloses redirecting airflow at least approximately 180 degrees from the outlet of the air filter to a turbocharger inlet.

B. Negri et al., Pausch, and Beckley et al.

Claims 3-4, 9-13, 17-18, and 23-24 were rejected as being unpatentable over Negri et al., in view of Pausch and Beckley et al., and in further view of design choice. Applicants respectfully traverse these rejections.

i. Claims 3-4 and 9-13

Claims 3-4 and 9-13 were rejected as being unpatentable over Negri et al., in view of Pausch and Beckley et al., and in further view of design choice. Claims 3-4 and 9-13 depend upon independent claim 32. Even if one were to combine Negri et al. with Pausch and Beckley et al., a number of claim 32 limitations would remain absent. Applicants respectfully submit that design choice would not cure these deficiencies.

a. Claims 3-4, 9-10, and 13

The Office Action on page 8 stated that "[o]ne having an ordinary skill in the turbocharged internal combustion engine art, would have found the radius of the bell-mouth transition being approximately 20%, and from approximately 3 to approximately 30% of the effective diameter of the inlet of the turbocharger; and said plenum has a cross-sectional area lowering flow velocity through said plenum to less than 75 m/s, as a matter of design choice." However, neither Negri et al, Pausch, nor Beckley et al. explicitly discloses any of these claim limitations. Accordingly, the combination of Negri et al. with Pausch and Buckley et al., even if such a combination could be properly made, in view of design choice does not yield the additional limitations of claims 3-4, 9-10 and 13.

The Federal Circuit has previously stated that "[t]o require [an applicant] to include evidence and arguments in the specification regarding whether [a limitation] was a matter of 'design choice' would be to require patent applicants to divine the rejections the PTO will proffer when patent applications are filed." *In re Chu*, 66 F.3d 292, 298 (Fed. Cir. 1995). Furthermore, "evidence of a suggestion, teaching, or motivation to combine" "must be clear and particular." *In re Dembiczak*, 175 F.3d 994, 999 (Fed. Cir. 1999). The Office Action did not explain what specific understanding or technical principle would have suggested the combination of Negri et al. with Pausch and Beckley et al. Therefore, Applicants respectfully submit that the design choice rejections have been overcome.

b. Claims 11-12

With respect to claims 11 and 12, the Office Action did not explain what specific understanding or technical principle would have suggested the combination of Negri et al., Pausch, and Beckley et al. *See, e.g., In re Dembiczak*, 175 F.3d at 999. Therefore, Applicants respectfully submit that the design choice rejections have been overcome.

ii. Claims 17-18 and 23-24

Claims 17-18 and 23-24 were rejected as being unpatentable over Negri et al., in view of Pausch and Beckley et al., and in further view of design choice. Claims 17-18 and 23-24 depend upon independent claim 34. Even if one were to combine Negri et al. with Pausch and Beckley et al., a number of claim 34 limitations would remain absent. Applicants respectfully submit that design choice would not cure these deficiencies.

The Office Action on page 8 stated that "[o]ne having an ordinary skill in the turbocharged internal combustion engine art, would have found the radius of the bell-mouth transition being approximately 20%, and from approximately 3 to approximately 30% of the effective diameter of the inlet of the turbocharger; and said plenum has a cross-sectional area lowering flow velocity through said plenum to less than 75 m/s, as a matter of design choice." However, neither Negri et al, Pausch, nor Beckley et al. explicitly discloses any of these claim limitations.

Accordingly, even if one skilled in the art were to combine Negri et al. with Pausch and Beckley et al., the additional limitations of claims 17-18 and 23-24 would remain absent.

Moreover, the Office Action did not explain what specific understanding or technical principle would have suggested the combination of Negri et al. with Pausch and Beckley et al. Therefore, Applicants respectfully submit that the design choice rejections have been overcome.

SUMMARY

Applicants respectfully submit that all of the pending claims are in condition for allowance and seek early allowance thereof. If for any reason the Examiner is unable to allow the application but believes that an interview would be helpful to resolve any issues, the Examiner is respectfully requested to call the undersigned at (312) 321-4277.

Respectfully submitted,

Timothy J. Le Duc
Registration No. 54,745
Attorney for Applicants

BRINKS HOFER
GILSON & LIONE
P.O. BOX 10395
CHICAGO, IL 60610
(312) 321-4200

Dated: March 6, 2006